

REMARKS

SECTION 102 REJECTION OF CLAIM 1

Claim 1 recites a method for posting a message on a message list. According to the claim, this message list is not for the benefit of a single processor. The message list is accessible to multiple processors. Each processor places messages in message slots on the message list. Since the entire message list is accessible to multiple processors, each processor can also inspect the message list for messages intended for itself.

In contrast, *Peterson* has nothing like a message list accessible to multiple processors and made of message slots. *Peterson* discloses a method for establishing communication between various devices (such as telephones, faxes, and computers equipped with modems) over a telephone network. The only "slots" *Peterson* refers to are simply intervals in time, i.e., time slots.

According to *Peterson*, during the time interval defined by a time slot, one can send a message. Applicant speculates that because of this, the time slot came to be regarded as a "message slot." This time slot, together with all preceding time slots, then came to be regarded as the "message list."

Claim 1 recites "modifying said new-message slot to specify an intended recipient of" a message that has been placed in a new-message slot. Thus, in order to anticipate claim 1, *Peterson* must disclose:

- (1) that the time interval during which a message is sent is "modified" in some way, and
- (2) that this modification somehow specifies an intended recipient of the message.

Given that *Peterson's* slots are intervals in time, it is unclear how they can possibly be modified at all. To one of ordinary skill in the art, the only plausible modification that could be made to an interval of time is to change its duration. However, nothing in *Peterson* suggests that

the recipient of a message is identified by the duration of the particular time slot into which that message is placed. Referring to *Peterson's* FIG. 2, there is no indication that messages intended for R1 are placed in time slots that are exactly 1.1 milliseconds long, whereas those for R2 are placed in time slots exactly 1.2 milliseconds long. In *Peterson*, there is no relationship between the duration of a time slot and the intended recipient of a message sent during that time slot.

Despite the above-mentioned conceptual deficiency, the Office suggests that col. 6 lines 15-26 and lines 39-45 both disclose a way to modify time intervals to specify an intended recipient of a message.

The first passage that allegedly discloses "modifying" a time slot reads as follows:

Output signal 66 is provided to a time slot processor 68 if a connection or communications link may be established between resources R. Time slot processor 68 determines if a time slot exists in which a message may be injected so that it would be received by all of the intended requested resources R. If a time slot presently exists in which a message may be sent so that it may be received by all of the requested resources R at a time when the requested resources are receptive to receiving the message, then the time slot processor generates a connect instruction 34 that is provided to the requestor resource R through communications router 12.¹

The foregoing passage merely describes determining whether there will soon be a free time slot that can be used to send a message. If such a free time slot will soon be available, the "time slot processor" generates a message (i.e., connect instruction 34) saying so. The time slot processor does not "modify" any time slot. The cited passage therefore has nothing to do with claim 1's limitation of modifying a time slot to specify an intended recipient of a message.

The second passage that allegedly discloses "modifying" a time slot reads as follows:

The connect message 34 includes a time slot assignment if a time slot is available in which to transmit a message so that by the time it reaches its intended destination, it will be able to be received by the resources R designated for receiving the message once it has been determined that a communications link between the 45 resources identified in message 30 is connectable.²

¹ *Peterson*, col. 6, lines 15-26.

² *Peterson*, col. 6, lines 39-45.

The foregoing passage describes modifying a “connect message 34” to include a “time slot assignment.” According to the cited passage, one modifies a connect message for the purpose of reserving a time slot. Claim 1 recites modifying a message slot, *not* a message. The cited passage, in contrast, discloses modifying a *message* 34. This has nothing at all to do with claim 1’s limitation of “modifying said new-message slot to specify an intended recipient of” a message.

It is apparent therefore that *Peterson* completely fails to teach claim 1’s step of modifying a new-message slot to specify an intended recipient of a message. Accordingly, Applicant requests reconsideration and withdrawal of the section 102 rejection of claim 1.

SECTION 102 REJECTION OF CLAIM 7

Claim 7 recites the additional limitation of “updating a message directory to indicate the presence of said new-message slot in said message list, said message directory being accessible to said plurality of processors.”

According to the Office Action, *Peterson* discloses updating a directory in the following passage:

Connect instruction 34 includes identification of the appropriate time slot of the present frame 20 during which the message is to be transmitted from the “requester” resource R and associated terminal T. Communications router 12 is a message relay station and may be implemented, for example, as a communications satellite or as a LAN. Instead of a connect message 34, control processor 14 may generate a “reject” message 32 that is provided to the “requestor” resource R via communications router 12 indicating that no time slot is available during which a message may be transmitted that would be received by one or more of the intended resource R message recipients.³

The foregoing passage describes something called a “connect message.” This “connect message” identifies a suitable time slot to be used for sending a message. Evidently, in the *Peterson* system, a transmitting device has to make an appointment to send a message. When the allotted appointment time arrives, i.e. when the time slot designated for the message begins, the *Peterson* system sends the message.

³ *Peterson*, col. 5, lines 10-21.

Nothing in the foregoing passage remotely resembles a message directory that would somehow indicate the presence of a new-message slot in a message list. In fact, there is nothing in *Peterson* at all that suggests the existence of a message list that is accessible to a plurality of processors as required by the claim.

The Office Action also states that the *Peterson* discloses updating a message directory in the following passage:

Output signal 66 is provided to a time slot processor 68 if a connection or communications link may be established between resources R. Time slot processor 68 determines if a time slot exists in which a message may be injected so that it would be received by all of the intended requested resources R. If a time slot presently exists in which a message may be sent so that it may be received by all of the requested resources R at a time when the requested resources are receptive to receiving the message, then the time slot processor generates a connect instruction 34 that is provided to the requestor resource R through communications router 12. If a time slot does not presently exist in which a message may be sent so that it may be received by all of the requested resources R, then the time slot processor generates queue instruction 36 which is provided as an input to step 60 in the form of a message request 30.⁴

The foregoing passage merely describes determining whether there exists a free time slot that can later be used to send a message. If such a free time slot exists, the "time slot processor" generates a message saying so. This has nothing to do with updating any message directory.

Nothing in the foregoing passage remotely resembles a message directory that would somehow indicate the presence of a new-message slot in a message list. In fact, nothing in *Peterson* even suggests the existence of a message list that is accessible to a plurality of processors as required by the claim.

It is apparent therefore that *Peterson* fails to teach each and every limitation of claim 7. Specifically, *Peterson* fails to teach anything remotely resembling updating a message directory to indicate the presence of a new-message slot in a message list, with the message directory also being accessible to multiple processors. Accordingly, Applicant requests reconsideration and withdrawal of the section 102 rejection of claim 7.

⁴ *Peterson*, col. 6, lines 15-29.

SECTION 103 REJECTIONS

Claims 2, 4, 6, and 8 stand rejected as being rendered obvious by the combination of *Peterson and Xie*.⁵

Each section 103 rejection made in the Office Action relies on the same three passages of *Xie*: namely col. 8, lines 64-67, col. 11, lines 7-9 and col. 11, lines 55-60. These passages have in common the occurrence of the words “pointer,” “mask,” and “list” in close proximity to each other. These words also appear in the rejected claims. However, as will be apparent below, the fact that a reference and a claim have words in common does not mean that the reference discloses the claimed subject matter.

For convenience, the three passages upon which the Office relies are pasted below and identified as passages A, B, and C.

Passage A, which is at *Xie* col. 8, lines 62-67 reads as follows:

A message mask therefore operates as a sort of circular queue to reflect the status of the last messages sent or received by a node. One or more pointers or references to mask positions may be maintained to identify which bit is to be associated with the next or current message and/or which is the oldest, valid bit in the mask.⁶

Passage B, which is at *Xie* col. 11, lines 5-9 reads as follows:

In state 220, the sequence number of the unsuccessful message is noted in order to prevent the originating object handler from reusing it. The sequence number may, for example, be stored in a list, a hash table or other data structure.⁷

Passage C, which is at *Xie* col. 11, lines 55-60 reads as follows:

Illustratively, one or more pointers and/or other data structures may be associated with the message mask. Pointers may, for example, identify the mask entry associated with the most recently used sequence number,

⁵ *Xie et al.*, U.S. Patent No. 6,662,213.

⁶ *Xie*, col. 8, lines 62-67.

⁷ *Xie*, col. 11, lines 5-9.

the next sequence number to be used, or the oldest sequence number associated with the message mask.⁸

SECTION 103 REJECTION OF CLAIM 2

Claim 2 recites the additional limitation of inserting a new-message slot into a message list that includes a first existing message slot having a pointer to a second existing message slot.

Passage A fails to teach message list accessible to plurality of processors

The Office Action suggests that *Xie* discloses the foregoing limitation in passage A.

According to passage A, each node maintains a message mask to keep track of the status of messages it has sent to other nodes.

In passage A, the Office appears to be mapping *Xie*'s message mask to claim 2's "message list". But *Xie*'s mask is not "accessible to a plurality of processors" as required by the claim. *Xie*'s message mask is accessible only to the particular node that maintains it. Therefore, *Xie*'s mask cannot be regarded as claim 2's "message list."

Moreover, *Xie*'s message mask is not even made of message slots. According to the Office's position in claim 1, a message slot is a time interval during which a message is sent. *Xie*'s message mask is obviously not made of time intervals. It is made of bits that track the status of messages sent by a particular node to other nodes.

Claim 2 also requires that the message list include a message slot having a pointer.

The "pointers" referred to in passage A are pointers that are outside the message mask. These pointers point into the message mask to identify bits associated with particular messages, such as the oldest message or the current message. They are not pointers from one element of the message mask (i.e. a first existing-message slot) to other elements of the message mask (i.e. a second existing message slot).

⁸ *Xie*, col. 11, lines 55-60.

Accordingly, passage A fails to support the proposition that *Xie's* message mask could correspond to claim 2's message list.

Passage B fails to teach message list accessible to plurality of processors

Next, the Office Action states that the additional limitation of claim 2 can be found in passage B.

In passage B, the Office appears to regard the "list, hash table, or other data structure" in which a sequence number is stored as being claim 2's "message list."

But the "list, hash table or other data structure" is not accessible to a plurality of processors. It is only accessible to the particular processor in which it resides. Moreover, there is nothing that suggests that the "list, hash table or other data structure" has message slots that include pointers to other message slots. In fact, according to the Office's position in claim 1, message slots are time intervals. It would be physically impossible for any data structure to "contain" time intervals. In fact, it is conceptually difficult to understand what it would even mean for a data structure to contain a time interval. Accordingly, it too cannot meet the claim limitation.

Passage C fails to teach message list

Finally, the Office Action suggests that claim 2's additional limitation is disclosed in passage C.

Passage C refers to certain data structures used by an object handler. The Office appears to regard these data structures as being claim 2's message lists. But none of these data structures are accessible to a plurality of processors as required by the claim. Moreover, there is no indication that the data structures used by an object handler have message slots that include pointers to other message slots.

Moreover, according to the Office's position in claim 1, a message slot is a time interval. It is conceptually unclear what it would mean for an interval of time to "contain" a pointer.

Summary

The Office Action has nominated three structures in *Xie* as allegedly corresponding to claim 2's message list. But none of these structures are accessible to a plurality of processors. Nor are any of these structures made up of a message list that includes message slots that have pointers to other message slots. None of these structures can possibly correspond to a "message list."

Thus even if one were to somehow combine *Peterson* and *Xie*, the result would still fail to meet the claim limitation.

Motivation to combine is flawed

The Office Action suggests that one of ordinary skill in the art would have found it obvious to "implement or incorporate *Xie*'s pointer in *Peterson*'s method in order to identify the next or current message."

The proposed motivation to combine the references makes no sense. One of ordinary skill in the art would have recognized that since the slots in *Peterson* are time slots, the current message would already be identified by the current time. Moreover, the next message would always be identified by knowing the current time and offsetting by the length of the time slot.

One of ordinary skill in the art would have regarded the Office's proposed modification of *Peterson* to identify next and current messages as being a gratuitous modification with no apparent technical purpose. The only plausible reason for so modifying *Peterson* appears to be that of trying to reconstruct the claims, not the claimed invention, by piecing together enough references that happen to use the same English words and phrases that comprise the claims.

Applicant notes that patent protection is sought for an invention, not for the particular words used in the claims. The Office's attempt to search the prior art for particular words and phrases used in the claims confuses the words used to set forth the metes and bounds of the invention with the invention itself.

SECTION 103 REJECTION OF CLAIM 5

Claim 5 recites the additional limitation of “modifying a destination mask associated with said new-message slot, said destination mask including information specifying all intended recipients of said message.”

The Office states that the additional limitation of claim 5 is disclosed by the same three passages A, B, and C that allegedly disclosed the additional limitation of claim 2.

In passage A, the Office appears to regard the message mask as corresponding to the claimed “destination mask.”

It is quite plain that a destination mask and a message mask are two different things. A message mask is associated with messages and a destination mask is associated with destinations. Destinations and messages are clearly not the same thing.

The Examiner appears to rely on the idea that since both destination masks and message masks are masks, they must mean the same thing. However, it is well established that disclosure of one species of a genus does not disclose all species of a genus. Accordingly, even if one were to combine the references, the result would still fail to yield the claimed invention.

Passage B, which is also cited as teaching the claim limitation, does not refer to masks at all. Hence it is difficult to see how it could possibly disclose claim 5's destination mask.

Passage C refers again to a message mask. This is different from a destination mask for reasons discussed in connection with passage A.

SECTION 103 REJECTION OF CLAIM 6

Claim 6 includes the additional limitation of modifying a data element that corresponds to a selected processor to indicate that that selected processor is an intended recipient of a message.

The Office states that this claim limitation is disclosed by the same three passages that allegedly disclose the limitations of claim 2.

Paragraphs A and C refer to a message mask that is maintained by a particular processor. As discussed in *Xie*, paragraph 8, lines 45-47, a processor maintains a plurality of message masks, each of which corresponds to an intended recipient of a message sent by that processor. Accordingly, there is nothing that could possibly be modified to indicate an intended recipient. For example, modifying a data element, such as a bit, in a message mask does not specify an intended recipient because the entire mask is already assigned to an intended recipient. This intended recipient does not change as a result of any modification of data elements contained in the message mask.

Paragraph B refers to modifying a memory location to note a sequence number of an unsuccessful message. But this modification does nothing to specify that a "selected processor is an intended recipient." Instead, the modification indicates a failed attempt to send a message.

It is apparent therefore that *Xie* fails to disclose the additional subject matter of claim 6.

SECTION 103 REJECTION OF CLAIM 8

Claim 8 recites the additional limitation of "updating an attention mask containing information indicative of which processors from said plurality of processors are intended recipients of messages contained in said message list."

The Office cites the same three passages A, B, and C as allegedly disclosing the foregoing claim limitation.

Paragraphs A and C refer only to message masks. Claim 8 refers to an attention mask. A message mask is plainly not an attention mask. Accordingly, paragraphs A and C fail to disclose "updating an attention mask" as required by claim 8.

Paragraph B does not refer to masks at all, and is therefore irrelevant to the additional limitation of claim 8.

CONCLUSION

Now pending in this application are claims 1-9, of which claim 1 is independent. No fees are believed to be due in connection with the filing of this response. However, to the extent fees are due, or if a refund is forthcoming, please adjust our Deposit Account No. 06-1050, referencing Attorney Docket No. 07072-0127001.

Respectfully submitted,

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